

In the claims:

1. (Currently Amended) A distillation process comprising providing a feed stream comprising a mixture of a lower boiling point solvent and a higher boiling point target compound to an evaporator, flashing off from said mixture a multi-component vapor containing said solvent and said target at a temperature of said mixture below the boiling point of said target, separating said target compound from said multi-component vapor, and maintaining said temperature of said mixture in said evaporator by providing to said evaporator a dilutive solvent comprising additional amounts of said solvent without substantial amounts of said target to said evaporator to maintain the boiling point of said mixture below that of said target.

2. (Previously presented) A process according to claim 1 wherein said target is mixed with a non-volatile contaminant or a contaminant having a boiling point higher than that of said target, which remains in said evaporator.

3. (Previously presented) A process according to claim 2 further comprising the step of providing said multi-component vapor to means for separating said target from said solvent.

4. (Original) A process according to claim 3 wherein said means for separating comprises a distillation tower.

5. (Original) A process according to claim 3 wherein said solvent is water and said target is ethylene glycol.

6. (Original) A process according to claim 3 wherein said target is an amine.

7. (Cancelled)

8. (Currently amended) A process according to claim 1 further comprising removing bottoms from said evaporator, cooling said bottoms and separating to allow sediment to separate from supernatant, and adding said supernatant to said evaporator.

9. (New) A target compound obtained by a process comprising providing to an evaporator a mixture of a lower boiling point solvent and said target compound, wherein the boiling point of said target compound is higher than that of said solvent, flashing off from said mixture a multi-component vapor containing said solvent and said

target compound at a temperature of said mixture that is below the boiling point of said target compound, providing a feed stream of said mixture to said evaporator, maintaining said temperature of said mixture by providing to said evaporator a dilutive solvent comprising additional amounts of said solvent, and separating said target compound from said solvent to provide said target compound.

10. (New) A target compound according to claim 9 comprising ethylene glycol.

11. (New) A target compound according to claim 9 comprising an amine.

12. (New) A method for separating a target compound from a mixture of said target compound and a solvent, wherein the boiling point of said target compound is higher than the boiling point of said solvent, said method comprising heating said mixture to a temperature lower than the boiling point of said target compound to provide a multi-component vapor comprising said target compound and said solvent, providing said multi-component vapor to a distillation column, condensing vapors passing up said distillation column to provide a condensed stream, and providing said condensed stream to said mixture.

13. (New) A method according to claim 12 comprising providing an amount of said condensed stream to said mixture adequate to maintain the boiling point of said mixture at said temperature.

14. (New) A method according to claim 12 wherein said solvent is water and said target compound is ethylene glycol.

15. (New) A method according to claim 14 wherein said temperature is about 260 degrees Fahrenheit.

16. (New) Apparatus comprising:

evaporator means for evaporating a mixture of lower boiling components and higher boiling components received as a liquid in a feed stream;

distillation means for separating lower boiling components from higher boiling components received from said evaporator means; and

means for providing said lower boiling components from said distillation means to said evaporator.

17. (New) Apparatus according to claim 16 wherein said means for providing comprises a pump for supplying said lower boiling components to said evaporator.

18. (New) Apparatus according to claim 17 further comprising a re-circulator for re-circulating said mixture in said evaporator means and said means for providing further comprises connection from said pump to said re-circulator.